Department: ME | Date: 20th to 21st December, 2019

A Two-Day Faculty Development Programme on

"COMPUTATIONAL FLUID DYNAMICS USING OPENFOAM"

20th to 21st December, 2019

The Department of Mechanical Engineering organized a Two-Day Faculty Development Programme (FDP) on "Computational Fluid Dynamics Using Openfoam" during **December 20-21, 2019.**

DAY 1:

Key Note Address: Dr. V. Ganesan, Research Advisor, Department of Mechanical Engineering, SVEC delivered a lecture on **"CFD AN OVER VIEW AND ITS APPLICATION TO ICE and GTC"**. He described the role of CFD in the case Internal Combustion Engines and Gas Turbine Engines. The participants interacted with the resource person and got their doubts clarified.

Dr. V. Ganesan delivering Keynote address

Participants interacting with the Resource Person

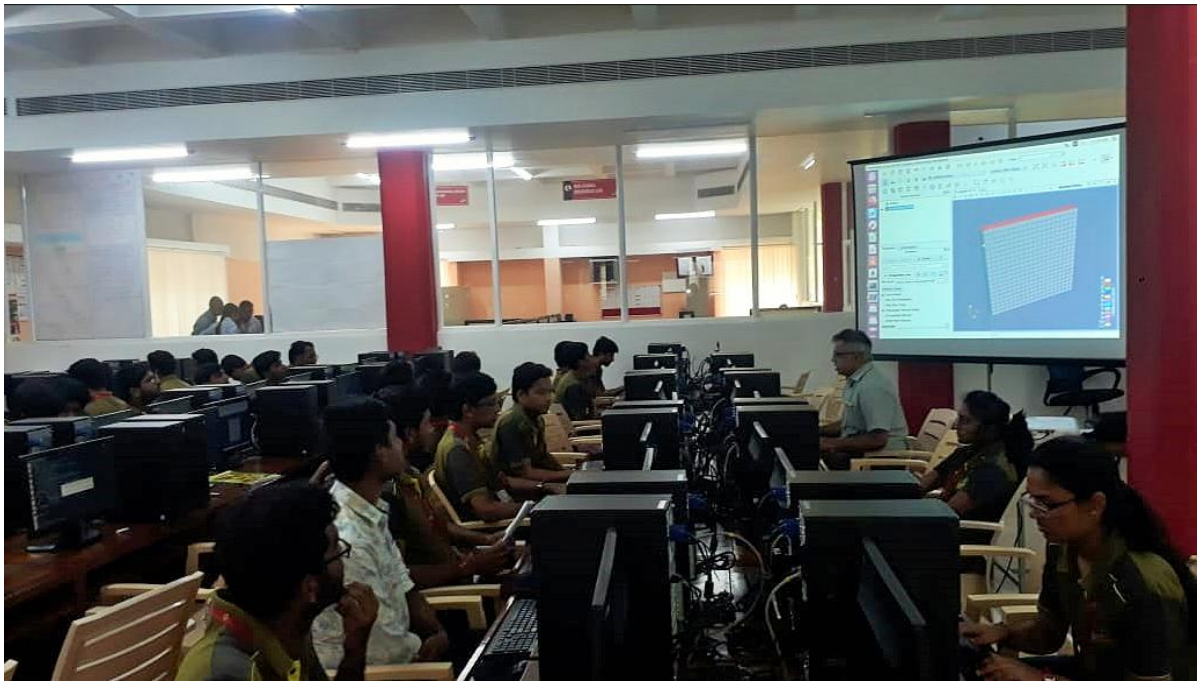
Aerospace Engineering, IIS, Bangalore, delivered a lecture on **Fundamentals of Fluid Dynamics, and Fluid Mechanics.** He discussed in detail the governing equations, formulation governing equations, and solution methods for governing equations, difference FEM, FDM and FVM in the Morning Session. In the Afternoon Session, he explained the basic tools in OpenFoam.

Dr. Ramesh Kolluru during his session

Participants during the session

DAY 2:

Morning Session & Afternoon Session: Dr. Ramesh Kolluru, Postdoctoral fellow, Department of Aerospace Engineering, IIS, Bangalore, delivered a lecture on CFD using OpenFoam. He trained the participants on downloading and installing the OpenFoam software. Later on, he solved CFD problem using OpenFoam. In the Afternoon Session, he discussed the topics **"Laplacian Foam and Ico Foam"** and **"Scalar Transport Foam"**. The participants interacted with the resource person and gained knowledge on steady or transient transport equation for a passive scalar, Transient solver for Incompressible, Laminar flow of Newtonian Fluids and Lid driven cavity problems. **Dr. Ramesh Kolluru** also discussed **"Rho Central Foam and Xiengine Foam"** focusing on density based compressible flow solver Supersonic flow over Forward Facing Step and solver for internal combustion engines.



Dr. Ramesh Kolluru delivering the lecture

Participants during the session